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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/392,869	09/09/1999	STEVEN P. NOLAN	11112/002001	1913
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20985 7590 07/15/2002

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EXAMINER

NAZARIO GONZALEZ, PORFIRIO

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 07/15/2002

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/392,869

Applicant(s)

NOLAN ET AL.

Examiner

Porfirio Nazario-Gonzalez

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-21 and 23-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-21 and 33-38 is/are allowed.
- 6) ☒ Claim(s) 9,12,13,23,24 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for X, X¹, L, and L¹ are monodentate ligands, does not reasonably provide enablement for a multidentate ligand formed by the bonding of at least two X, X¹, L, or L¹ variables. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The instant specification only provide guidance for the making of the catalytic complex where X, X¹, L, and L¹ are monodentate ligands. However, the instant specification does not teaches or discloses how to make the catalytic complexes where at least two X, X¹, L, or L¹ variables form a multidentate ligand. Furthermore, one skilled in the art cannot extrapolate from compounds having monodentate ligands to compounds having multidentate ligands without undue experimentation.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 9, 13, 23, 24 and 27-30 are rejected under 35 U.S.C. 102(a) as being anticipated by Herrmann et al., “A Novel Class of Ruthenium Catalysts for Olefin Metathesis”, abstract, 11th International Symposium on Homogeneous Catalysis, 12-17 July 1998. The Herrmann et al. abstract disclose ruthenium catalyst containing alkylidene and N-heterocyclic carbene moieties

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of the general formulas 1 and 2 which are active for ROMP of cyclic olefins and RCM of α,ω -dienes. Note that the compounds of the formula 1 and/or 2 read on the instant claims when C¹ and C² are absent.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrmann et al., "A Novel Class of Ruthenium Catalysts for Olefin Metathesis", abstract, 11th International Symposium on Homogeneous Catalysis, 12-17 July 1998. The Herrmann et al reference teaches ruthenium organometallic complexes containing alkylidene and N-heterocyclic carbene moieties of the general formulas 1 and 2 which are catalytically active for ROMP of cyclic olefins and RCM of α,ω -dienes. The instant claims differ from the Herrmann et al. reference by having the homogeneous ruthenium catalyst linked to a solid support when C¹ and C² are absent. However, it is well known in the catalyst art to attach a homogeneous catalyst to a support and form a heterogeneous catalyst to increase stability, and, in some cases the activity of the catalyst system. Therefore, one of ordinary skill in the art would have been motivated, at the time the invention was made, to convert a homogeneous catalyst to a heterogeneous catalyst using a solid support to attach the homogeneous catalyst in order to increase stability and/or activity of the catalyst system.

Allowable Subject Matter

8. Claims 14-21 and 33-38 are allowed.

9. Claims 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Porfirio Nazario-Gonzalez whose telephone number is 703-308-4632. The examiner can normally be reached on Mon.-Thur. (7:30 AM - 6:00 PM).